



CATERPILLAR DOZERS

D8, D9, D10 & D11 SERIES



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The following cleaning/inspection guide has been segmented to facilitate the process. The segmentation is as follows:

- [1. Tracks/Track Pads/Bearing Covers and Rollers](#)
- [2. Front End and underside of Engine Bay](#)
- [3. Harmonic Balancers](#)
- [4. Engine Bay and Housing](#)
- [5. Cabin and below Floorpans](#)
- [6. Rear End](#)
- [7. Ripper Cradle/Cutting Teeth and Belly Plates](#)
- [8. Blades and Push Arms](#)
- [9. General](#)

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Image 2:

Landscape shot of a typical Caterpillar Dozer. Structurally, the D8, D9, D10 & D11 series are basically the same except for small variations and obviously size differences.

Note that the cabin has been removed for shipping purposes as well as the bearing covers (red arrows). There are 16 bearing covers in total. On the D10, these bearing covers are rectangular, however on the D8's they are oval shaped and on the D11 they are triangular. These bearing covers must be removed for cleaning and inspection purposes.

1. Tracks/Track Pads/Bearing Covers and Rollers

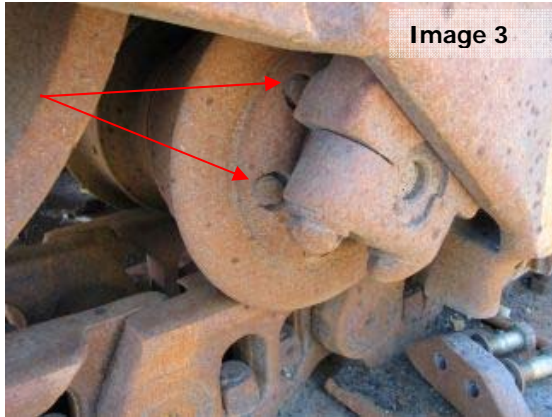


Image 3:

The tracks on any dozer need to be rolled to allow the cleaning and inspection of the countersunk bolt heads (red arrows) on each of the rollers.

Image 4:

The Track Guides have been removed for ease of cleaning and inspection. On some models the two bolt ends (red arrows) are countersunk at the rear of the track guide. Ensure that the rear of this guide is checked for any contamination in these areas.

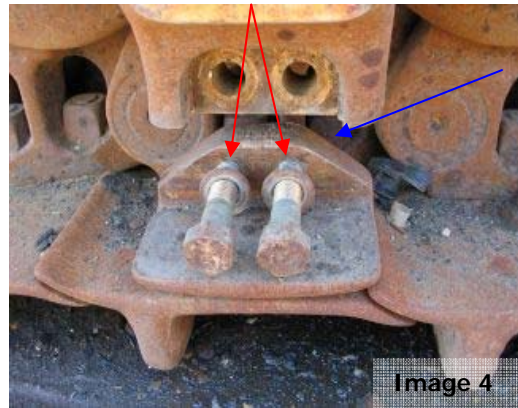


Image 5:

The bearing covers on all dozers need to be removed for cleaning as they are concave and can harbour contamination. Verification of all will be required at the time of inspection.

Image 6:

Bearing cover on a D8 still attached.



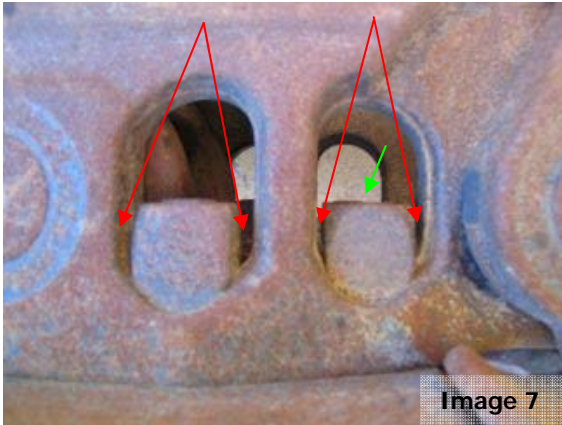


Image 7:

This illustration shows the small gaps between the track pad nuts, which require careful cleaning and inspection. To inspect the rear of these nuts, either use a small inspection mirror or inspect the backside of the outside nuts from the inside of the track frame and vice versa.

Image 8:

When rolling the tracks during cleaning and inspection, ensure that when the pads open slightly on the apex as shown, that these areas are carefully checked for contamination.

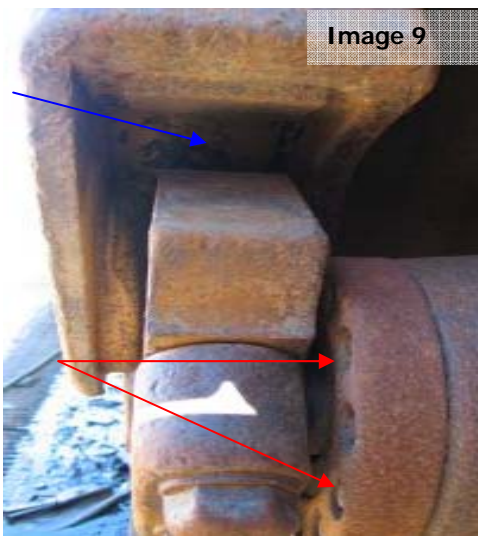
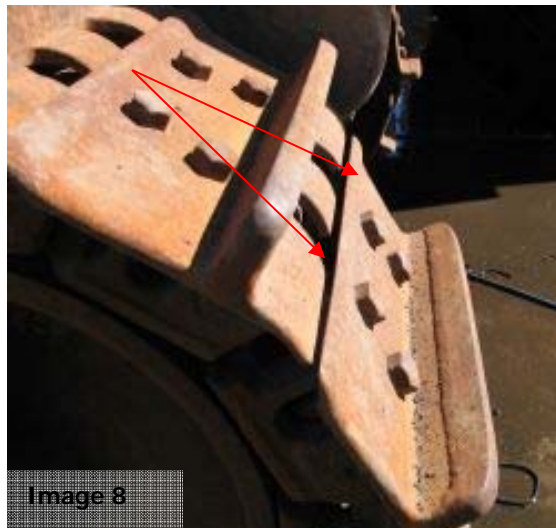


Image 9:

Illustrates the cover above the front idler wheel. The tracks must be rolled for cleaning and inspection of the countersunk bolts (red arrows) and flush up inside the housing (blue arrow).

Image 10:

Illustrates the side of the track frame, rollers and a bearing cover (blue arrow) removed. The track guide (green arrow) is still in place, but needs to be removed for cleaning and inspection. Flush and carefully inspect all pivot points (red arrow).

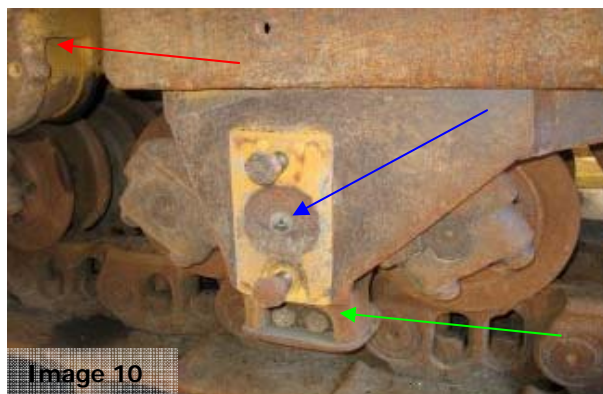


Image 11:

The small plastic covers (red arrows) are open-ended and can harbour contamination. Most can be accessed from the inside of the track frame. Those that are not accessible must be removed for cleaning and inspection. Ensure where the sway bar joins the track frame (blue arrow), is clean and free of all contaminated grease.

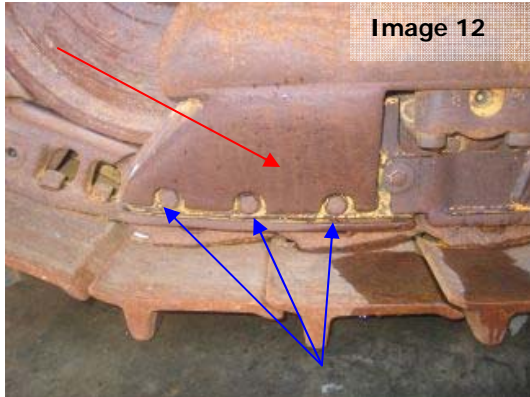
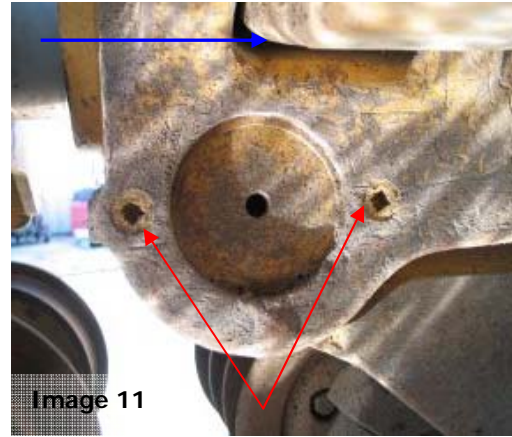
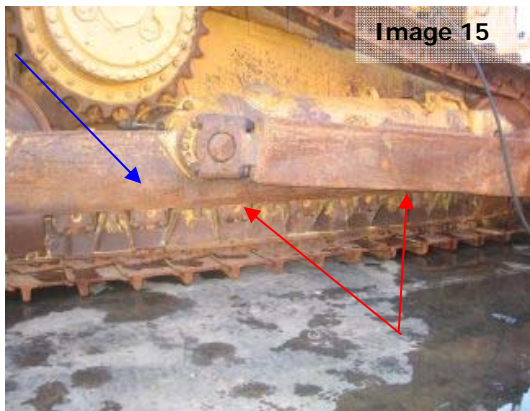
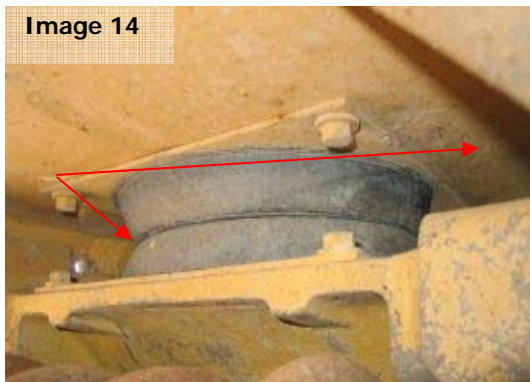
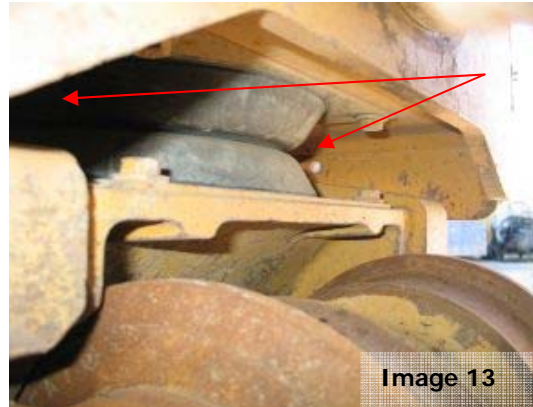


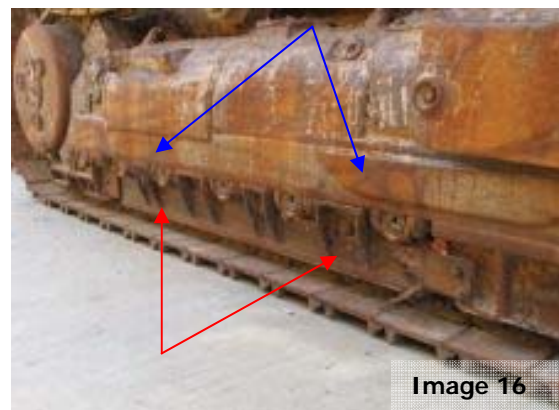
Image 12:

On the ends of some models will be protective plates (red arrow), as illustrated above. The structures are generally hollow and need to be flushed via the small open gaps at the bottom (blue arrows) to verify cleanliness.



Images 13 & 14:

Inside the track frame highlighting the rubber mounts and horizontal ledges that can be found inside many track frames. The inside of all track frames needs to be thoroughly cleaned and inspected.



Images 15 & 16:

Several illustrations of Rock Guards (red arrows) attached to Dozer Tracks. If rock guards are present, these must be removed from both the outside and inside of the track frame to allow access for both cleaning and inspection. The channel above the rock guards (blue arrows) is hollow and must be flushed via the boltholes once the rock guards have been removed. See general section for example of hollow frame above rock guards.

2. Front End and underside of Engine Bay

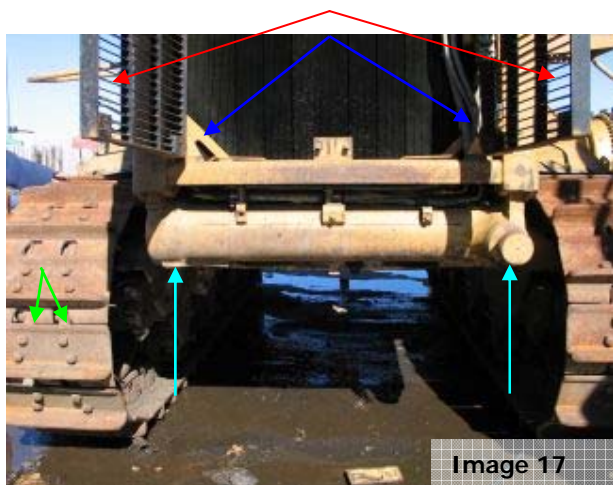


Image 17:

The radiator grill (red arrows) has been opened, allowing access to the radiator fins. If the grill cannot be opened as illustrated it must be removed at the time of inspection.

The green arrows show the track pads slightly opened when at the apex. The aqua arrows highlight where the bolts holding the belly plates in place have been removed. This chassis is hollow and will require the removal of the belly plates and flushing via the bolt holes to verify cleanliness (in the

presence of the inspecting officer). The blue arrows are to highlight the two vertical pillars either side of the radiator. These are hollow and can generally be accessed for flushing via small drainage holes, located in behind the radiator grill.

Image 18:

This illustration is showing the bolt holes where the belly plate has been removed, allowing access to the circular nose bar. This area must be flushed in the presence of the inspecting officer to verify cleanliness.

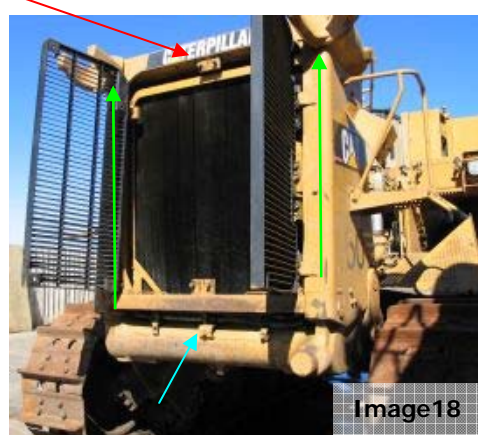


Image 19:

Illustrates where the belly plate bolts have been removed, allowing access to the hollow side chassis rail (see aqua arrow in illustration below). This area must be flushed in the presence of the inspecting officer to verify cleanliness.

Image 20:

Illustrates where the belly plate bolts have been removed, allowing access to the hollow side chassis rail (see aqua arrow in illustration below). This area must be flushed in the presence of the inspecting officer to verify cleanliness.



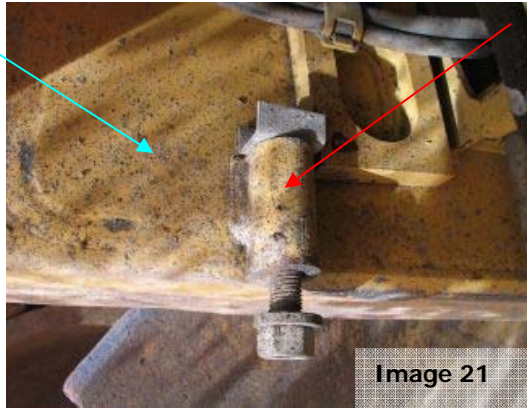


Image 21:

The aqua arrow highlights the hollow side chassis rail that can be accessed via the belly plate bolt holes. The red arrow highlights other belly plate bolts that must be removed from the sheath to verify cleanliness.

Image 22:

The red arrows highlight the sway bar found under the front of the Dozer. Ensure that all contaminated grease is removed and flush this area to verify clean.

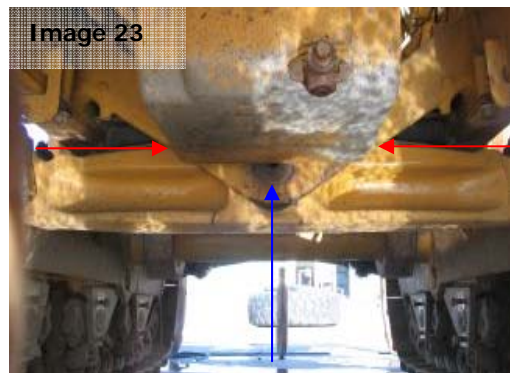
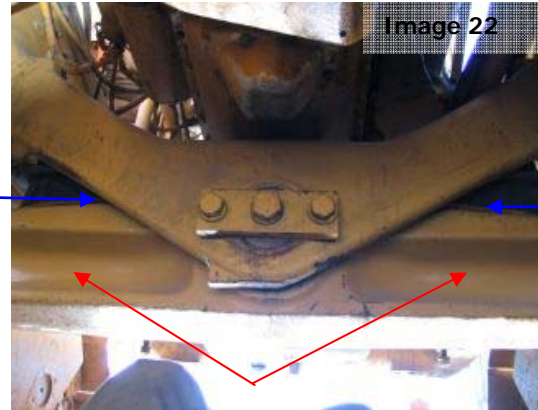


Image 23:

The sump under the front end of the Dozer. Ensure that this area has had all contaminated grease removed. The blue arrow highlights a small hole at the front of the sway bar. The red arrows again highlight the gap above the sway bar, which requires flushing to verify cleanliness. Check all small openings for cleanliness.

Image 24:

The red arrow highlights the universal joint and the blue the bell housing. A protective cover has been removed from around the universal joint to allowing cleaning and inspection.

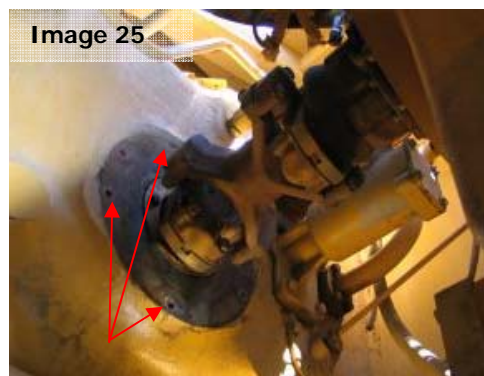
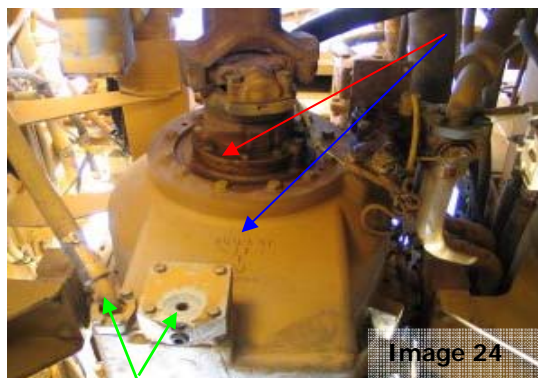


Image 25:

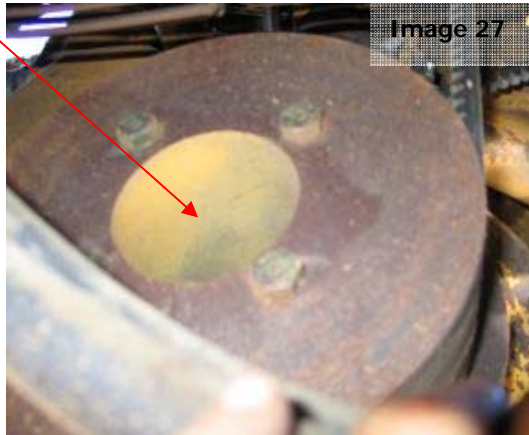
Another view of the bell housing. Note the countersunk holes (red arrows) left once the protective cover has been removed.

Image 26:

The protective plate that must be removed to allowing cleaning of the universal joint.



3. Harmonic Balancers



Images 27 & 28:

Examples of Harmonic Balancers that are found at the front of the engine block. These areas are generally hollow and can harbour contamination.

4. Engine Bay and Housing

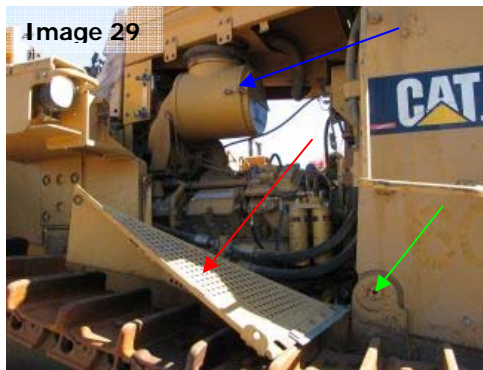


Image 29:

The right-hand side of the Dozer engine housing. All non-affixed engine covers have been removed for cleaning and inspection. The red arrow highlights the checker plate inside the engine cover, which will require flushing at the time of inspection. The air-filter (blue arrow) will need to be removed from the housing and verified clean (high pressure air). Remove all contaminated grease from pivot points (green arrow)

Image 30:

The left-hand side of the Dozer engine housing. All non-affixed engine covers are to be removed for cleaning and inspection. The red arrow highlights the checker plate inside the engine cover, which will require flushing at the time of inspection. Check all framework inside the engine cover for hollow channels which will require flushing if not completely sealed.

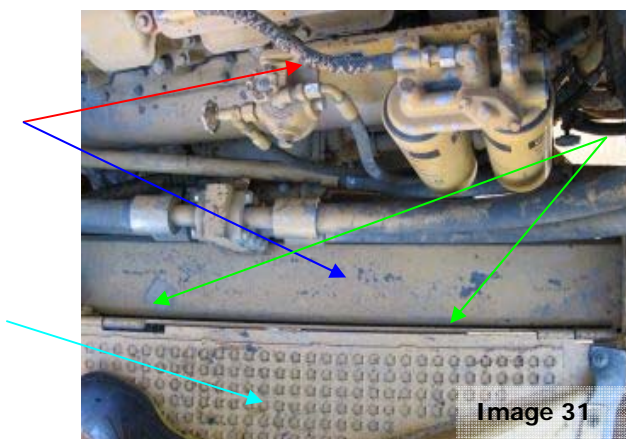
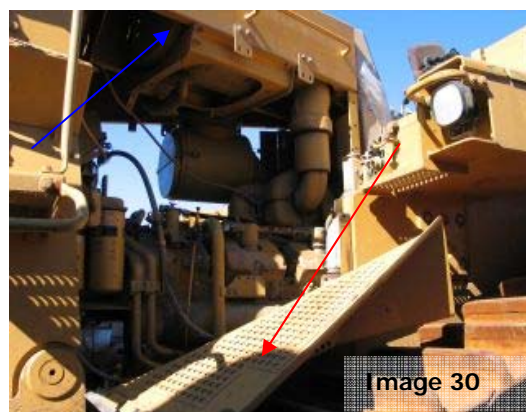
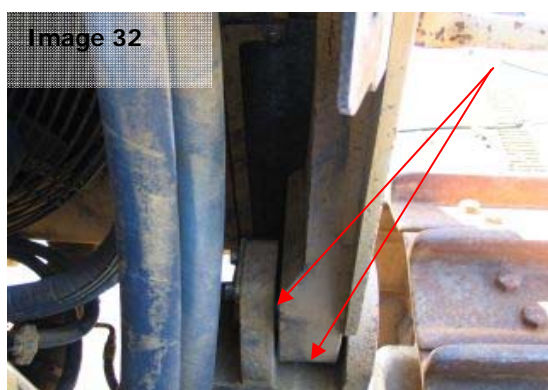


Image 31:

The side of the engine block (red arrow) and hollow chassis rail (blue arrow). The engine cover has been laid back on the hinge, exposing a small gap (green arrows) between the side cover and the chassis rail. Flush along this small opening to remove all contaminants. Flush checker plate (aqua arrow).

Image 32:

Check that all pivot points (red arrows) such as the one either side of the radiator has been thoroughly cleaned and all contaminated grease removed.



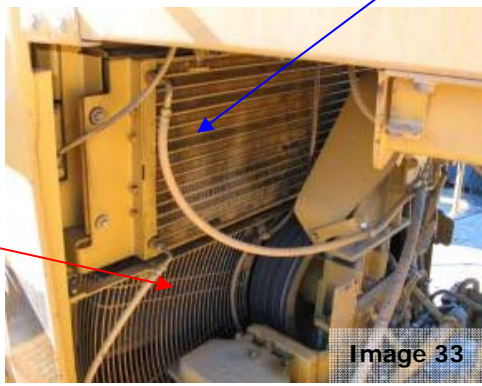
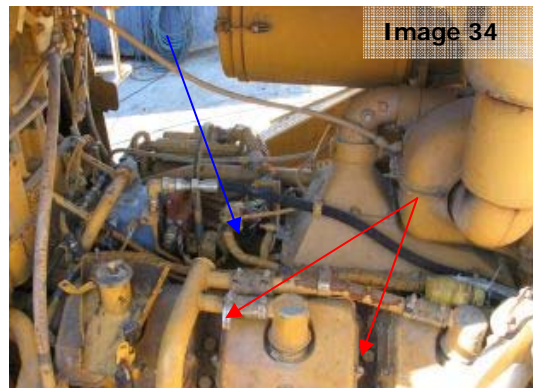


Image 33:

The front end of the engine block, the oil cooler and the radiator grill. The radiator grill (red arrow) must be removed, allowing access to the inside of the radiator shroud. The oil cooler (blue arrow) needs to be flushed in the presence of the inspecting officer to verify cleanliness of the fins.

Image 34:

The topside of a typical Dozer block. Check between each tappet cover (red arrows) and along the centre of the block. Best to flush these areas after visual inspection to ensure all contamination has been removed.



5. Cabin and below Floorpans

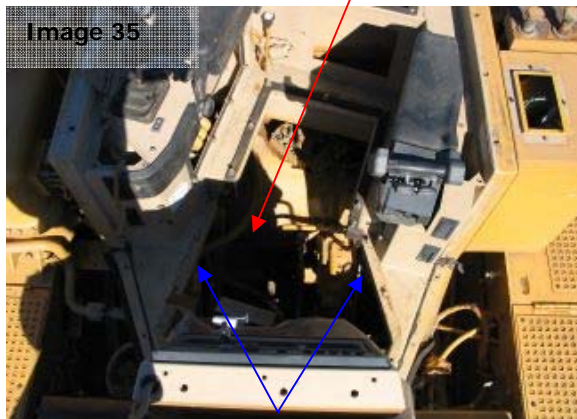


Image 35:

The floorpan (red arrow) and seat have been removed, allowing access to the hollow framework (blue arrows) below the floorpan and the top of the transmission.

Image 36:

The seat must be removed to allow the floorpan to be taken out, allowing access to the top of the transmission and inside the joystick control panels (see following pictures). Once the seat has been removed, ensure the rubber seat shroud is clean inside.

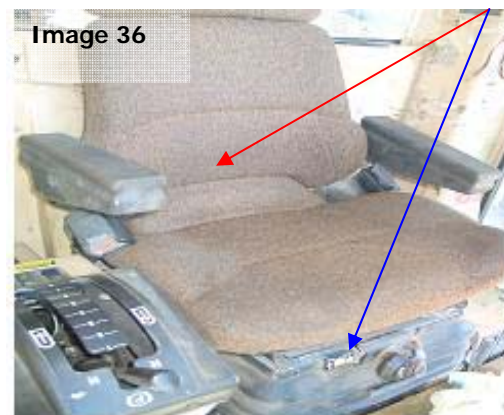


Image 36

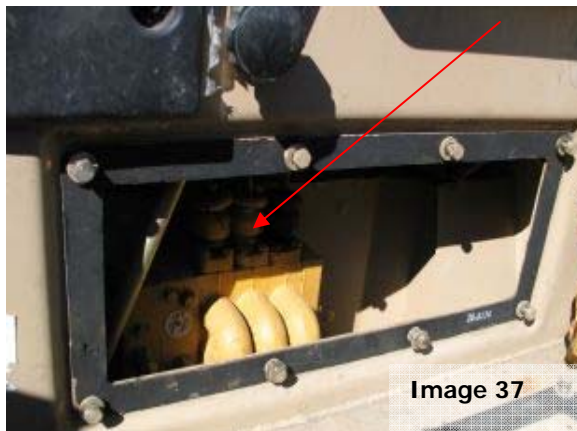


Image 37

Images 37 & 38:

These pictures illustrate the joystick control panels located either side of the seat. All non-affixed panels have been removed, allowing access for cleaning and inspection. These areas sometimes have ledges inside which harbour contamination and need to be thoroughly inspected. The joystick control on the right houses the electronics and care must be taken when inspecting this area.



Image 38

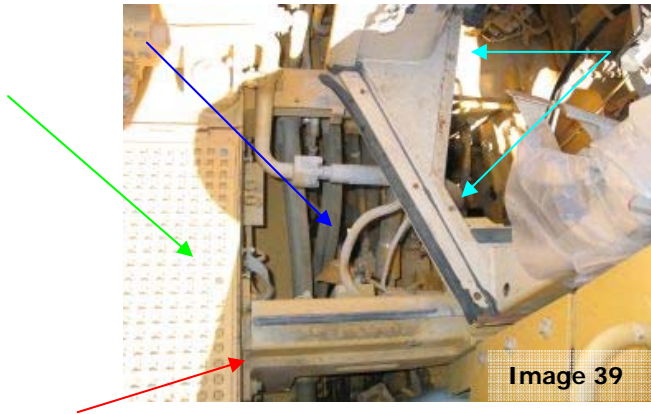


Image 39:

The red arrow indicates the open-ended box channel that runs along the front of the cabin, below the instrument panel. The floor panel just outside the door has been removed, allowing access to this hollow open-ended channel (blue arrow). All checker plate flooring (green arrow) and hollow channels must be flushed at the time of inspection. The aqua arrows highlight where the floorpan attaches to the base. These channels are open-ended also and will be illustrated later.

Image 40:

The opposite side of the cabin, again showing the open-ended hollow channel below the floorpan (red arrow). The blue arrow indicates where the floor panel has been removed from outside the cabin, exposing this channel. On smaller dozers this channel may not be open-ended, but rather have a small opening on the underside, in the centre as indicated by the green arrow.

The aqua arrows highlight where the floorpan attaches to the base. These channels are open-ended also and will be illustrated

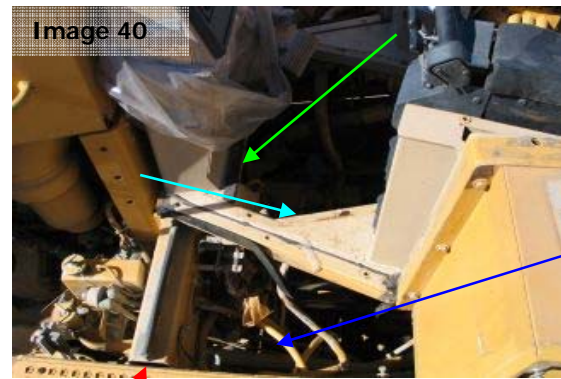


Image 40:

attaches to the base. These later.

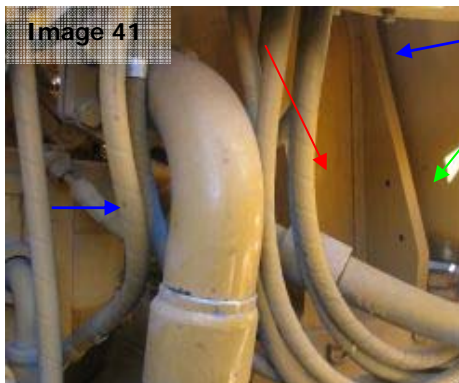


Image 41:

Images 41 & 42:

Below the floorpan and towards the rear, are the base supports of the ROPS (roll over protection system). These do not sit flush against the side wall of the dozer and will require flushing along these seams (blue arrows) to verify cleanliness. There are a series of bolts along the backside (out of view but highlighted by the green arrows), which require thorough inspection.

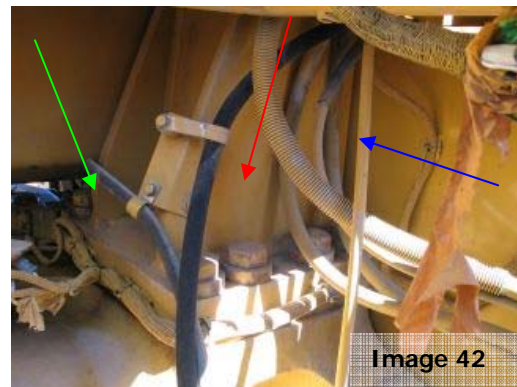


Image 42:



Image 43:

Image 43:

The hollow channels located just below the floorpan. The red arrow indicates where the opening can be found. These channels require flushing to verify cleanliness.



Image 44:

Another view of the hollow open-ended channels (red arrow indicates opening) located just below the floorpan. These channels require flushing to verify cleanliness.

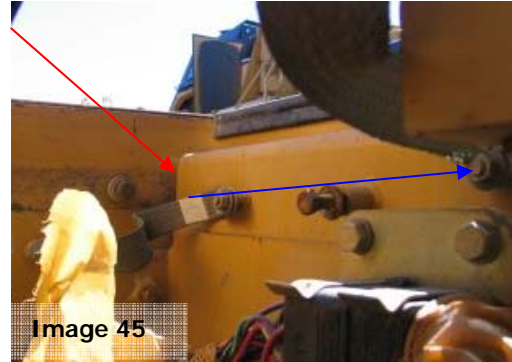


Image 45



Image 46

Images 45 & 46:

Another view of the open-ended box channel that runs along the front of the cabin, below the floorpan. The red arrows highlight the access points where these can be flushed (blue arrow).



Image 47

Image 47:

The back of the engine block as seen from below the floorpan. The firewall has been removed, allowing access. Note the red arrow highlighting the contamination at the rear of the block. The firewall must be either removed or loosened to allow inspection of the back of the engine block.

6. Rear End

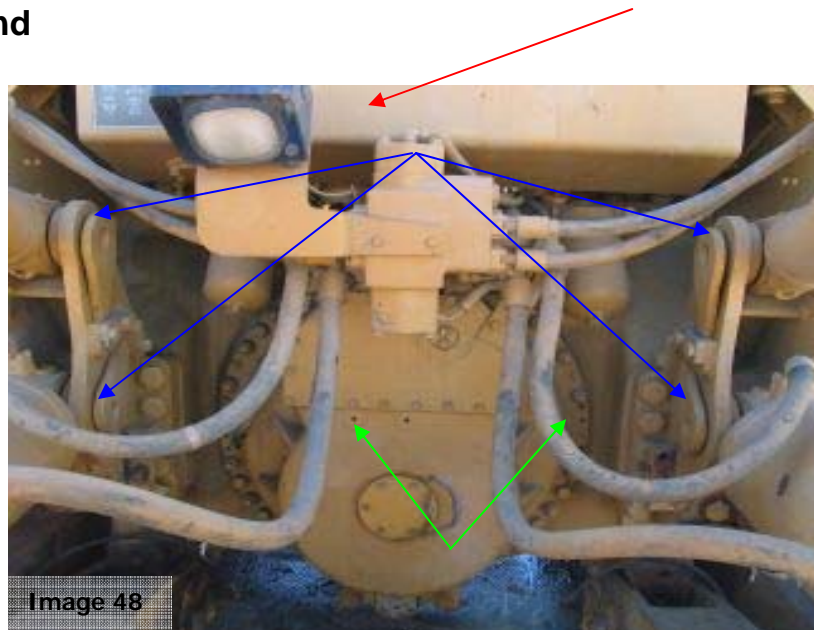
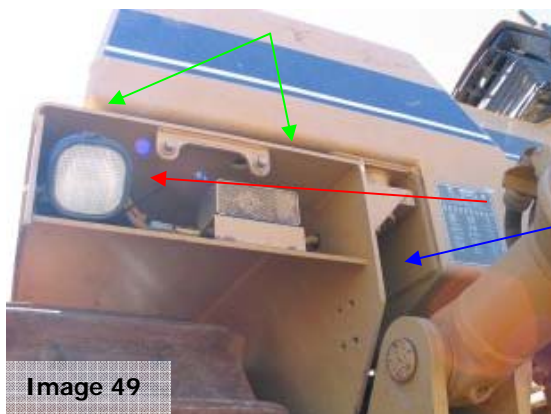


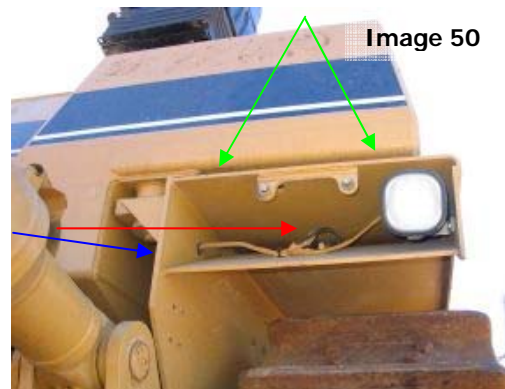
Image 48:

The rear end of a typical Dozer. The panel below the fuel cell (red arrow) must be removed allowing access to the topside of the bell housing and the rear of the ROPS. Each of the ripper cradle pivot points must be totally free of contaminated grease (blue arrows). Check all countersunk holes to ensure all are free of contamination (green arrows).



Images 49 & 50:

The rear tail lights and hollow cavities. The plates have been removed allowing access to these areas. Check inside the small cavity highlighted by the blue arrows. Ensure that the small recess (green arrows) between the bottom of the fuel cell and the top of the arch is free of all contamination.



7. Ripper Cradle/Cutting Teeth and Belly Plates

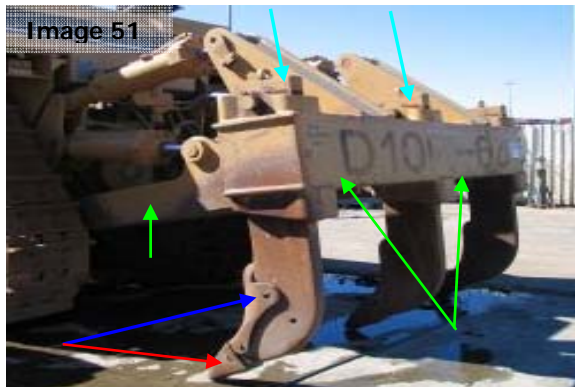


Image 51:

A typical ripper cradle and Cutting Teeth. The cutting teeth (red arrows and wear plates (blue arrow) must be removed from each blade to allow cleaning and inspection. Check the underside of the ripper cradle for drainage holes (see following illustration). Ensure that the small gap between the blade and the cradle (aqua arrows) is flushed at the time of inspection.

Image 52:

The underside of a typical ripper cradle with a drainage hole (red arrow). If the drainage hole is present, this hollow cavity will need to be flushed in the presence of the inspecting officer in order to verify cleanliness.



Image 52

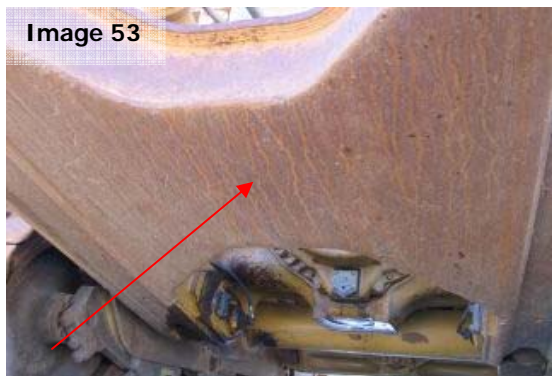


Image 53:

The middle of the ripper cradle (red arrow) is also hollow and may not have any drainage holes. If no drainage holes are located, check carefully for cracks, splits or evidence of repair.

Image 54:

The inside of a typical belly plate. Check along each of the gussets (blue arrows) as on some models these are open-ended and require flushing in the presence of the inspecting officer in order to verify cleanliness.

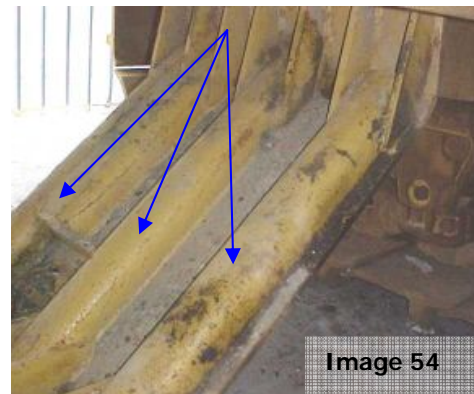


Image 54



Image 55

Image 55:

On some belly plates, gussets can be found on the outside of the belly plate, as highlighted by the red arrows. These need to be flushed to verify clean.

8. Blades and Push Arms

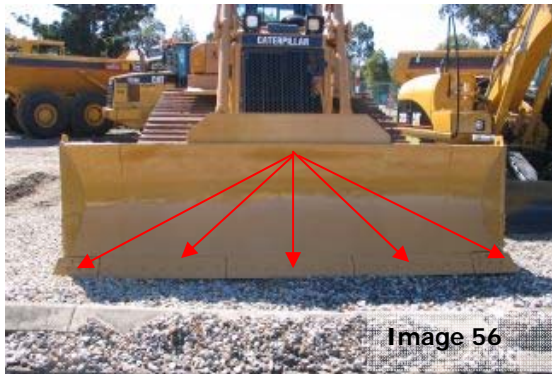


Image 56:

A typical blade on a Dozer. All cutting teeth (red arrows) must be loosened and flushed to verify cleanliness. Check for any cracks, splits or evidence of repair to all surfaces. If detected, the internal of the blade will have to be verified clean.

Image 57:

A close up of the cutting teeth on a blade that need to be loosened and flushed to verify cleanliness.

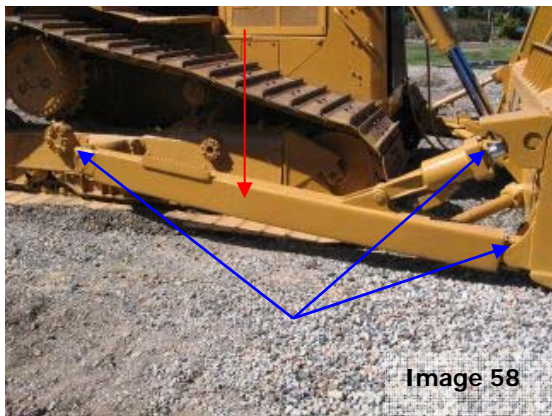
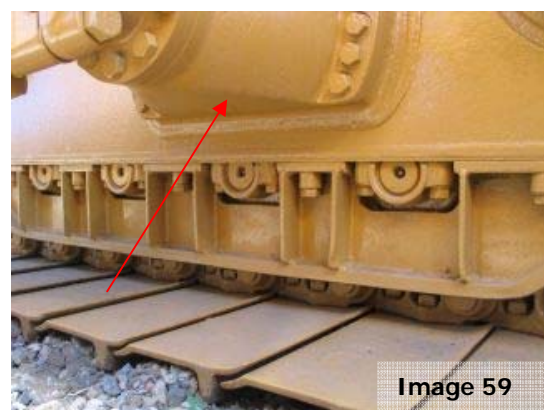


Image 58:

The push arms (red arrow) on a Dozer. These are generally sealed units, but check for any cracks, splits or evidence of repair. Ensure all contaminated grease is removed from pivot points (blue arrows).

Image 59:

Illustrates where the push arms attach to the track frames. These units may have drainage holes underside (red arrow), which will require flushing if present.



9. General

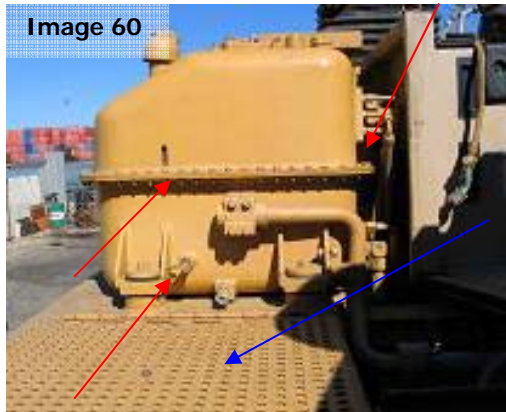


Image 60:

The oil tank located outside the cabin. The rear and underside (red arrows) require thorough cleaning and inspection. All checker plate (blue arrow) requires flushing in the presence of the inspecting officer.



Image 61:

Air-filter pre cleaners or dust collectors must have the covers removed and be cleaned.



Image 62:

On some models the air-conditioning filter can be found on the topside of the engine cover, just below the windscreen. Remove filter, check for cleanliness. The filter housing will also require inspection.



Image 63:

Check the air-filter housing for internal cleanliness.



Images 64 & 65:

All surfaces of the fuel cell need to be carefully cleaned and inspected, particularly the back and underside (red arrows).



Image 66:

All wiring harnesses are to be carefully cleaned and inspected.

Image 67:

All looming around hydraulic hoses is to be carefully cleaned and inspected.





Images 68 & 69:

Check all internal cabin framework for small holes. If present, flush to verify clean.

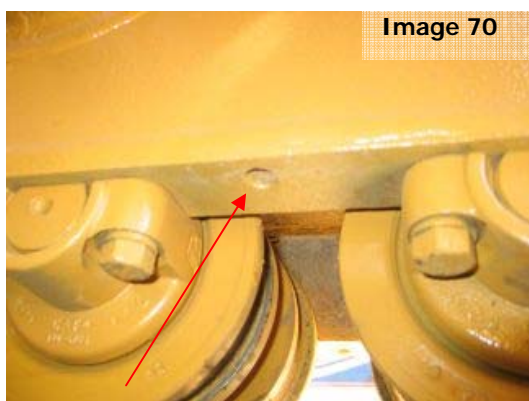


Image 70:

If rock guards are present they must be removed for cleaning and inspection. The red arrow highlights where the rock guard bolt has been removed, allowing access to the hollow section above. These must be flushed in the presence of the inspecting officer to verify cleanliness.

Image 71:

All batteries are to be loosened from the tie-down points for cleaning and inspection.

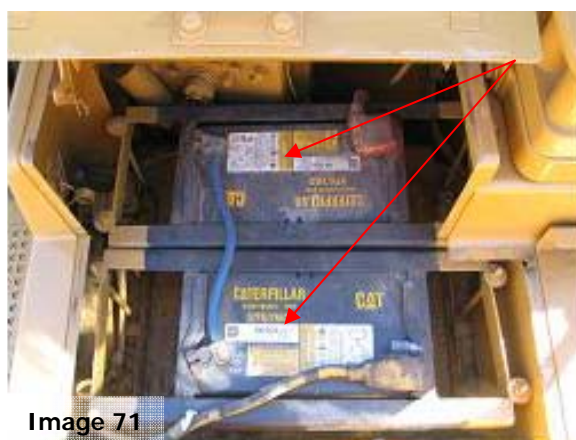


Image 71